

Wei-Ming Ni

Ph.D.: 1979, Courant Institute of Mathematical Sciences, New York University

Regular Academic Positions

Assistant Professor, University of Pennsylvania, 1979-1981

Member, Institute for Advanced Study, 1979-1980

Assistant Professor, University of Minnesota, 1981-84

Associate Professor, University of Minnesota, 1984-86

Professor, University of Minnesota, 1986-present

Director, Center for PDE, ECNU, Shanghai, China, 2010 - present

Editorial Boards (Active)

- Journal of Partial Differential Equations, 1991-present
- Discrete and Continuous Dynamical Systems-A, 1997-present
- Journal of Differential Equations, 2005-present
- Journal of Differential Equations, Editor-in-Chief, 2012-present

Selected Organization Activities:

- Organizer of the program on “Nonlinear Diffusion Equations” at MSRI, Berkeley, CA, 1986
- Organizer of the International Conference on Diffusion Equations at Gregynog, Wales, UK, 1989
- Organizer of the special-year program on “Phase Transitions and Free Boundaries”, IMA, Minnesota, 1990-1991
- Organizer of AMS Special Sessions:
 - (i) Nonlinear Problems in Mechanics, 1984
 - (ii) Concentration Phenomena in Differential Equations, 1997
 - (iii) Nonlinear Evolution Equations, Pisa, Italy 2002 (1st Joint AMS- UMI Meeting)
- Organizer of the conference “Asymptotic Methods in Nonlinear PDEs”. Mathematical Center of State Education Commission, Peking University, China, 1998.
- Organizer of the PDE program at Pacific Institute of Mathematical Sciences, University of British Columbia, Vancouver, Canada, 2001
- Scientific Committee, International Conference on Differential Equations and Dynamical Systems, Wilmington, N.C. 2002
- Scientific Committee, International Conference on Abstract and Applied Analysis, Hanoi, Vietnam, 2002
- Organizer, Pan Am Advanced Study Institute, Santiago, Chile, 2003

- Scientific Committee, International Conference on Dynamical Systems and Differential Equations:
 - 4th meeting, Wilmington, NC 2002
 - 5th meeting, Pomona, CA 2004
 - 6th meeting, Poitiers, France 2006
 - 7th meeting, Dallas, Texas 2008
 - 8th meeting, Dresden, Germany 2010
 - 9th meeting, Orlando, Florida 2012
- Scientific Committee (Chair), East China PDE Conference:
 - 1st meeting, Nanjing, China 2004
 - 2nd meeting, Shanghai, China 2005
 - 3rd meeting, Shanghai, China 2006
 - 4th meeting, Yantai, China 2007
 - 5th meeting, Nanjing, China 2008
 - 6th meeting, Shanghai, China 2009
 - 7th meeting, Wuhan, China 2010
 - 8th meeting, Xian, China 2011
- Organizer, Program on PDE in spatial ecology, National Center for Theoretical Sciences, Hsinchu, Taiwan, May, 2012

Ph.D. Students:

Yi Li, 1988
Tiancheng Ouyang, 1989
Xuefeng Wang, 1990
Jaeduck Jang, 1991
Changfeng Gui, 1991
Manuel del Pino, 1992
Guy Bernard, 1993
Cheng-Chih Sung, 1993
Xiaofeng Ren, 1994
Jungcheng Wei, 1994
Yuan Lou, 1995
Salome Martinez, 2000
Seong-A Shim, 2001
Yang Wang, 2006
Tuoc Van Phan, 2007
Fang Li, 2008
Linlin Su, 2010

Adrian Lam, 2011
Xiaoqing He (current)

Honors

Highly Cited Researcher, ISI, 2002
Special Contribution Prize, Mathematical Society of Taiwan, China, 2009

Major Invited Lectures

- 24-hour lecture series, National Tsing Hua University, Hsinchu, Taiwan, 1987
- Principal speaker - a series of 4 lectures, conference on Nonlinear Elliptic Equations, RIMS, Kyoto University, Japan, 1988.
- “Karcher Lecturer” in Mathematics - a series of 3 lectures, University of Oklahoma, 1989
- Principal speaker - a series of 10 lectures, workshop on Semilinear Elliptic Equations, Peking University, China, 1989
- “Frontier Lecturer” in mathematics - a series of 3 lectures, Texas A & M University, 1993
- Plenary lecturer, US-China Workshop in Differential Equations, Hangzhou, China, 1996
- Invited hour speaker, American Mathematical Society, Milwaukee, 1997
- “Distinguished Lecturer” in Mathematics - a series of 4 lectures, University of Iowa, 1997
- Plenary speaker - a series of 5 lectures at the conference “Asymptotic Methods in Nonlinear PDE”, Peking University, China, 1998
- A series of 5 lectures, International Center for Theoretical Physics, Trieste, Italy, 1998
- Plenary speaker - a series of 3 lectures, EVEQ 2000, Charles University, Prague, Cech Republic, 2000
- Main speaker - a series of 4 lectures, Pacific Institute of Mathematical Sciences, University of British Columbia, Canada, 2001
- Principal speaker - a series of 3 lectures, NSF workshop on “Variational Methods,” Arizona, 2002
- Plenary speaker - “Nonlinear Evolution Equations,” Accademia Nazionale dei Lincei, Rome, Italy, 2003
- A series of six lectures, Nanjing University, Nanjing, China, 2004
- A lecture series on “Qualitative Properties of Nonlinear Elliptic and Parabolic Equations”, University of Rome I, Rome, Italy, 2005
- A series of four lectures, Japan Mathematical Society, Sendai, Japan, 2005

- Lecture Series (18 hours), Nanjing University, China, 2006
- Lecture Series (8 hours), ECNU, Shanghai, China, 2007
- Lecture Series, “111-Project” (Lead Mathematician), ECNU, Shanghai, China 2008
- Plenary Speaker, Annual meeting of the Mathematical Society of the Republic of China, Jiayi, Taiwan, December 2009
- CBMS Conference (AMS-SIAM-NSF), Principal Lecturer, (10 lectures), Tulane University, New Orleans, May 2010
- Lecture Series (5 hours), 1st Korean PDE School, NIMS, Daejeon, Korea, February 2011
- Croucher Lecture (a series of 3 lectures), CUHK, Hong Kong, March 2011

Publications

1. (with D.G. de Figueiredo) Perturbations of second order linear elliptic equations by nonlinearities without Landesman-Lazer conditions, *Nonlinear Analysis: Theory, Methods and Applications* 3 (1979), 629-634.
2. (with B. Gidas and L. Nirenberg) Symmetry and related properties via the maximum principle, *Comm. Math. Physics* 68 (1979), 209-243.
3. Some minimax principles and their applications in nonlinear elliptic equations, *J. d'Analyse Math.* 37 (1980), 248-275.
4. On the existence of global vortex rings, *J. d'Analyse Math.* 37 (1980), 208-247.
5. (with B. Gidas and L. Nirenberg) Symmetry of positive solutions of nonlinear elliptic equations in \mathbf{R}^n , *Advances in Math. Supplementary Studies*, Vol. 7A (1981), 369-402.
6. Stability and instability of positive solutions of nonlinear elliptic equations with applications in vortex flow problem, preprint (Institute for Advanced Study, 1980).
7. Conformal metrics with zero scalar curvature and a symmetrization process via maximum principle, *Annals of Math. Studies*, Vol. 102 edited by S.T. Yau, (1982), 193-202.
8. On the elliptic equation $\Delta u + K(x)u^{\frac{n+2}{n-2}} = 0$, its generalization and applications in geometry, *Indiana Univ. Math. J.* 31 (1982) 493-529.
9. A nonlinear Dirichlet problem on the unit ball and its applications, *Indiana Univ. Math. J.* 31 (1982), 801-807.
10. On the elliptic equation $\Delta u + K(x)e^{2u} = 0$ and conformal metrics with prescribed Gaussian curvatures, *Invent. Math.* 66 (1982), 343-352.
11. (with C. Kenig) On the existence and boundary behavior of solutions to a class of nonlinear Dirichlet problems, *Proc. AMS*, 89 (1983), 254-258.
12. On the positive radial solutions of some semilinear elliptic equations on \mathbf{R}^n , *Appl. Math. Optim.* 9 (1983), 373-380.
13. Uniqueness of solutions of nonlinear Dirichlet problems, *J. Differential Equations* 50 (1983), 289-304.
14. On a singular elliptic equation, *Proc. AMS* 88 (1983), 614-616.
15. (with C. Kenig) An exterior Dirichlet problem with applications to some nonlinear equations arising in geometry, *Amer. J. Math.* 106 (1984), 689-702.
16. (with P. Sacks and J. Tavantzis) On the asymptotic behavior of solutions of certain quasilinear parabolic equations, *J. Differential Equations* 54 (1984), 97-120.

17. (with R.D. Nussbaum) Uniqueness and nonuniqueness for positive radial solutions of $\Delta u + f(u, r) = 0$, *Comm. Pure Appl. Math.* 38 (1985), 67-108.
18. (with P. Sacks) The number of peaks of positive solutions of semilinear parabolic equations. *SIAM J. Math. Analysis* 16 (1985), 460-471.
19. Uniqueness, nonuniqueness and related questions in nonlinear elliptic and parabolic equations, *Proc. Symp. Pure Math.* 45 (part 2)(1986), (F. Browder, Ed.), 229-241
20. (with P. Sacks) Singular behavior in nonlinear parabolic equations, *Trans. Amer. Math. Soc.* 287 (1985), 657-671.
21. (with C.E. Kenig) On the elliptic equation $Lu - k + Ke^{2u} = 0$, *Annali della Scuola Normale Superiore di Pisa (Series IV)* 12 (1985), 191-224.
22. (with W.Y. Ding) On the existence of positive entire solutions of a semilinear elliptic equation, *Arch. Rational Mech. Anal.* 91 (1986), 283-308.
23. (with W.Y. Ding) On the elliptic equation $\Delta u + Ku^{\frac{n+2}{n-2}} = 0$ and related topics, *Duke Math. J.* 52 (1985), 485-506.
24. (with J. Serrin) Non-existence theorems for quasilinear partial differential equations, *Rendiconti del Circolo Matematico do Palermo (supp.)* 8 (1985), 171-185.
25. (with F.-H. Lin) On the least growth of harmonic functions and the boundary behavior of Riemann mappings, *Comm. Partial Diff. Equations* 10 (1985), 767-786.
26. (with J. Serrin) Existence and nonexistence theorems for ground states of quasilinear partial differential equations. The anomalous case. *Proc. Accad. Lincei.* 77 (1986), 231-257.
27. (with I. Takagi) On the Neumann problem for some semilinear elliptic equations and systems of activator-inhibitor type, *Trans. Amer. Math. Soc.* 297 (1986), 351-368.
28. (with J. Serrin) Nonexistence theorems for singular solutions of quasilinear partial differential equations, *Comm. Pure Appl. Math.* 39 (1986), 379-399.
29. (with S. Yotsutani) On Matukuma's equation and related topics. *Proc. Japan Acad. (Series A)* 62 (1986), 260-263.
30. On the behaviour of solutions to a semilinear Neumann problem, *Proc. CMA (Australian National University)* 12 (1987) 124-136.
31. Lane-Emden Equations and related topics in nonlinear elliptic and parabolic problems, *Aspects of Math.* 10 (A. Tromba, ed.) (1987), 135-152.
32. *Some Aspects of Semilinear Elliptic Equations*, Lecture Notes, National Tsing Hua University, Hsinchu, Taiwan, R.O.C., 1987.

33. (with C.S. Lin) A counterexample to the nodal domain conjecture and a related semilinear equation, *Proc. Amer. Math. Soc.* 102 (1988), 271-277.
34. (with C.S. Lin and I. Takagi) Large amplitude solutions to a chemotaxis system, *J. Diff. Eqns.* 72 (1988), 1-27.
35. (with S. Yotsutani) Semilinear elliptic equations of Matukuma-type and related topics, *Japan J. Appl. Math.* 5 (1988), 1-32.
36. (with C.S. Lin) On the diffusion coefficient of a semilinear Neumann problem, *Lecture Notes in Math.* vol. 1340 (Springer-Verlag), (1988), 160-174.
37. Some aspects of semilinear elliptic equations on \mathbf{R}^n , *Nonlinear Diffusion Equations and their Equilibrium States*, Vol. II (W.-M. Ni, L. Peletier and J. Serrin, ed.), Springer-Verlag (1988), 171-205.
38. (with Y. Li) On conformal scalar curvature equations in \mathbf{R}^n , *Duke Math. J.* 57 (1988), 895-924.
39. (with S.-B. Hsu) On the asymptotic behavior of solutions of $v''(x) + x \sin v(x) = 0$, *Bull. Inst. Math. Acad. Sinica* 16 (1988), 109-114.
40. (with L. Peletier and J. Serrin) *Nonlinear Diffusion Equations and their Equilibrium States*, Volumes I and II, Springer-Verlag, 1988.
41. (with Y. Li) On the existence and symmetry properties of finite total mass solutions of Matukuma equation, Eddington equation and their generalizations *Arch. Rational Mech. Anal.* 108 (1989), 175-194.
42. (with S.-B. Hsu) Uniqueness property of large deformation of a heavy cantilever, *Bull Inst. Mat. Acad. Sinica* 17 (1989), 193-204.
43. Recent progress in semilinear elliptic equations, *RIMS Kokyuroku* 679 (1989), 1-39.
44. Recent progress on the elliptic equation $\Delta u + Ke^{2u} = 0$ in \mathbf{R}^2 , *Rend. Seminario Mat. Torino* (Special Issue - Proceedings of the Conference on PDE's and Geometry) (1989), 1-10.
45. (with N. Kawano and S. Yotsutani) A generalized Pohozaev identity and its applications, *J. Math. Soc. Japan* 42 (1990), 541-564.
46. On the shape of solutions of semilinear elliptic equations, *Proc. Nonlinear Analysis* (F.-C. Liu, ed.) World Scientific (1991), 223-230.
47. (with K.-S. Cheng) On the structure of the conformal Gaussian curvature equation on \mathbf{R}^2 , *Duke Math. J.* 62 (1991), 721-737.
48. (with K.-S. Cheng) On the structure of the conformal Gaussian curvature equation on \mathbf{R}^2 , II. *Math. Ann.* 290(1991), 671-680.
49. (with I. Takagi) On the shape of least-energy solutions to a semilinear Neumann problem, *Comm. Pure Appl. Math.* 44(1991), 819-851.

50. On the stability of steady states of a semilinear heat equation in \mathbf{R}^n , *Proc. 10th Daewoo Workshop in Pure Math.* (Seoul, Korea) 10, Part II (1991), 107-115.
51. (with Y. Li) On the asymptotic behavior and radial symmetry of positive solutions of semilinear elliptic equations in \mathbf{R}^n , I. asymptotic behavior, *Arch. Rational Mech. Anal.* 118 (1992), 195-222.
52. (with Y. Li) On the asymptotic behavior and radial symmetry of positive solutions of semilinear elliptic equations in \mathbf{R}^n , II. radial symmetry, *Arch. Rational Mech. Anal.* 118 (1992), 223-243.
53. (with T.-Y. Lee) Global existence, large time behavior and life span of solutions of a semilinear parabolic Cauchy problem, *Trans. Amer. Math. Soc.* 333 (1992), 365-378.
54. (with I. Takagi) On the existence and the shape of solutions to a semilinear Neumann problem, *Nonlinear Diffusion Equations and their Equilibrium States*, Vol. III (N.G. Lloyd, W.-M. Ni, L.A. Peletier and J. Serrin, eds.), Birkhauser (1992), 425-436.
55. (with K.-S. Cheng) On the structure of conformal scalar curvature equation on \mathbf{R}^n , *Indiana Univ. Math. J.* 41 (1992), 261-278.
56. (with X.-B. Pan and I. Takagi) Singular behavior of least-energy solutions of a semilinear Neumann problem involving critical Sobolev exponent, *Duke Math. J.* 67 (1992), 1-20.
57. (with C. Gui and X. Wang) On the stability and instability of positive steady states of a semilinear heat equation in \mathbf{R}^n , *Comm. Pure Appl. Math.* 45 (1992), 1153-1181.
58. (with N.G. Lloyd, L.A. Peletier and J.B. Serrin) *Nonlinear Diffusion Equations and their Equilibrium States*, vol. III, Birkhauser, 1992.
59. (with Y. Li) Radial symmetry of positive solutions of nonlinear elliptic equations in \mathbf{R}^n , *Comm. Partial Diff. Eqns.* 18 (1993), 1043-1054.
60. (with I. Takagi) Locating the peaks of least-energy solutions to a semilinear Neumann problem, *Duke Math. J.* 70 (1993), 247-281.
61. (with I. Takagi) Spike-layers in semilinear elliptic singular perturbation problems, *Degenerate Diffusions* (IMA volumes in Mathematics and its Applications, No. 47, W.-M. Ni, L.A. Peletier and J.L. Vazquez, eds.) Springer-Verlag (1993), 131-139.
62. (with L.A. Peletier and J.L. Vazquez) *Degenerate Diffusions*, (IMA volumes in Mathematics and its Applications, No. 47) Springer-Verlag, 1993.
63. Spike-layers, geometry of domains and singular perturbations, *Proc. Second Sino-Japan PDE Conference* (1994), 103-110.

64. (with I. Takagi) Point-condensation generated by a reaction-diffusion system in axially symmetric domains, *Japan J. Industrial Appl. Math.* 12 (1995), pp. 327-365.
65. (with J. Wei) On the location and profile of spike-layer solutions to singularly perturbed semilinear Dirichlet problems. *Comm. Pure Appl. Math.* 48 (1995), 731-768.
66. (with G. Chen, Y. Deng and J. Zhou) Boundary element monotone iteration scheme for semilinear elliptic equations, *Math. Comp.* 65 (1996), 943-982.
67. Diffusion vs. cross-diffusion: An elliptic approach, *Nonlinear Partial Differential Equations and their Applications* (J. Jang and J. Seo, eds.) (1996), 1-10.
68. (with Y. Lou) Diffusion, self-diffusion and cross-diffusion, *J. Diff. Eqns.* 131 (1996), 79-131.
69. (with I. Takagi and J. Wei) On the location and profile of spike-layer solutions to a singularly perturbed semilinear Dirichlet problem: Intermediate solutions, *Duke Math. J.* 94 (1998), 597-618.
70. Diffusion, cross-diffusion and their spike-layer steady states, *Notices AMS* 45 (1998), 9-18.
71. (with Y. Lou and Yaping Wu) On the global existence of a cross-diffusion system, *Discrete and Continuous Dynamical Systems* 4 (1998), 193-203.
72. (with G. Chen, Y. Deng and J. Zhou) Boundary element monotone iteration scheme for semilinear elliptic equations, II: Coupled 2x2 systems and visualizations, *Math. Comp.* 69 (1999), 629-652.
73. (with Y. Lou) Diffusion vs. cross-diffusion: An elliptic approach, *J. Diff. Eqns.* 154 (1999), 157-190.
74. (with G. Chen and J. Zhou) Algorithms and visualization for nonlinear elliptic equations, *Int. J. Bifurcation & Chaos* 10 (2000), 1565-1612.
75. (with Y. Lou and S. Martinez) On 3x3 Lotka-Volterra competition systems with cross-diffusion, *Discrete and Continuous Dynamical Systems* 6 (2000), 175-190.
76. (with Y. Lou and T. Nagylaki) On diffusion-induced blowups in a mutualistic model, *Nonlinear Analysis* 45 (2001), 329-342.
77. (with C. Gui and X. Wang) Further study on a nonlinear heat equation, *J. Diff. Eqns.* 169 (2001), 588-613.
78. (with S. Bae) Existence and infinite multiplicity for an inhomogeneous semilinear elliptic equation on \mathbf{R}^n , *Math. Ann.* 320 (2001), 191-210.
79. (with I. Takagi and E. Yanagida) Stability of least-energy patterns in a shadow system of an activator-inhibitor system, *Japan J. Industrial Appl. Math.*

18 (2001), 259-272.

80. (with G. Chen, A. Perronne and J. Zhou) Algorithms and visualizations for solutions of nonlinear elliptic equations, II: Dirichlet, Neumann and Robin boundary conditions and problems in 3D, *Int. J. Bifurcation & Chaos* 11 (2001), 1781-1799.

81. (with P. Polacik and E. Yanagida) Monotonicity of stable solutions in shadow systems, *Trans. AMS* 353 (2001), 5057-5069.

82. (with Y.J. Kim) On the rate of convergence and asymptotic profile of solutions to the viscous Burgers equation, *Indiana Univ. Math. J.* 51 (2002), 727-752.

83. (with A. Ambrosetti and A. Malchiodi) Solutions concentrating on spheres to symmetric singularly perturbed problems. *C.R. Acad. Sci. Paris* 335 (2002), 145-150.

84. (with A. Ambrosetti and A. Malchiodi) Singularly perturbed elliptic equations with symmetry: Existence of solutions concentrating on spheres, Part I, *Comm. Math. Physics* 235 (2003), 427-466.

85. (with Y. Lou and S. Yotsutani) On a limiting system in the Lotka- Volterra competition with cross-diffusion, *Discrete and Continuous Dynamical Systems* 10 (2004), 435-458.

86. (with G. Chen, Y. Deng and J. Zhou) Semilinear elliptic boundary value problems with nonlinear oblique boundary conditions, a boundary element monotone iteration approach, *Contemporary Math.* 357 (2004), 17-48.

87. (with G. Chen, Z. Deng, C.-R. Hu and J. Zhou) A note on the elliptic Sine-Gordon equation, *Contemporary math.* 357 (2004), 49-67.

88. (with A. Ambrosetti and A. Malchiodi) Singularly perturbed elliptic equations with symmetry: Existence of solutions concentrating on spheres, Part II, *Indiana Univ. Math. J.* 53 (2004), 297-329.

89. Qualitative properties of solutions to elliptic problem, *Handbook of Differential Equations* (M. Chipot and P. Quittner, eds.) 1(2004), 157-233.

90. (with J. Jang and M. Tang) Global bifurcation and structure of Turing patterns in 1-D Lengyel-Epstein model, *J. Dynamics and Differential Equations* 16 (2004), 297-320.

91. Diffusion and cross-diffusion in pattern formation, *Rend. Lincei: Matematica Applicazioni* (A. Tesi, ed.) 401 (2004), 197-214.

92. (with A. Malchiodi and J. Wei) Multiple clustered layered solutions for semilinear Neumann problems on a ball, *Ann. Inst. H. Poincaré Anal. Non Linéaire* 22 (2005), 143-163.

93. (with M. Tang) Turing patterns for the Lengyel-Epstein system for the CIMA reaction, *Trans. AMS* 357 (2005), 3953-3969.
94. (with J. Wei) On positive solutions concentrating on spheres for the Gierer-Meinhardt system, *J. Diff. Eqns.* 22 (2006), 158-189.
95. (with S. Martinez) Periodic solutions for a 3×3 competitive system with cross-diffusion, *Discrete and Continuous Dynamical Systems* 15 (2006), 725-746.
96. (with K. Suzuki and I. Takagi) The dynamics of a kinetic activator-inhibitor system *J. Diff. Eqns.* 229 (2006), 426-465.
97. (with A. Malchiodi and J. Wei) Boundary clustered interfaces for the Allen-Cahn equation, *Pacific J. Math.* 229 (2007), 447-468.
98. (with X. Wang) On the first positive Neumann eigenvalue, *Discrete and Continuous Dynamical Systems* 17 (2007), 1-19.
99. (with H. Jiang) A priori estimates of stationary solutions of an activator-inhibitor system, *Indiana Univ. Math. J.* 56 (2007), 681-732.
100. (with H. Jiang) On steady states of van der Waals force driven thin film equations, *European J. Appl. Math.* 18 (2007), 153-180.
101. (with F.-H. Lin and J. Wei) On the number of interior peak solutions for a singularly perturbed Neumann problem, *Comm. Pure Appl. Math.* 60 (2007), 252-281.
102. (with F. Li and K. Nakashima) Stability from the point of view of diffusion, relaxation and spatial inhomogeneity, *Discrete and Continuous Dynamical Systems* 20 (2008), 259-274.
103. (with Y.J. Kim) Higher order approximations in the heat equation and the truncated moment problem, *SIAM J. Math. Anal.* 40 (2009), 2241-2261.
104. (with F. Li) On the global existence and finite time blow-up of shadow systems, *J. Diff. Eqns.* 247 (2009), 1762-1776.
105. (with K. Nakashima and L. Su) An indefinite nonlinear diffusion problem in population genetics, I: Existence and limiting profiles, *Discrete and Continuous Dynamical Systems* 27 (2010), 617-641.
106. (with Y. Lou and L. Su) An indefinite nonlinear diffusion problem in population genetics, II: Stability and multiplicity, *Discrete and Continuous Dynamical Systems* 27 (2010), 643-655.
107. (with K.Y. Lam) Limiting profiles of semilinear elliptic equations with large advection in population dynamics, *Discrete and Continuous Dynamic Systems* 28 (2010), 1051-1067.
108. *The Mathematics of Diffusion*, CBMS-NSF Regional Conference Series in Applied Mathematics 82, SIAM, 2011

109. (with Y.J. Kim and M. Taniguchi) Non-existence of localized traveling waves with non-zero speed in single reaction-diffusion equations, submitted.
110. (with K.-Y. Lam) On the dynamics of a diffusive Lotka-Volterra weak competition system, preprint.